

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1 and 6, DELETE claim 3 and ADD new claim 7 in accordance with the following:

1. (currently amended) A three-dimensional model analyzing apparatus for analyzing a physical property of a three-dimensional model, comprising:
 - an information receiving unit which receives information on a three-dimensional model as an object to be analyzed;
 - an edge detecting unit which detects an edge of said three-dimensional model;
 - a smoothing unit which smoothes said edge and transforms said edge into a curved surface having a predetermined radius of curvature;
 - an analyzing unit which analyzes said three-dimensional model in accordance with a finite element method after said edge is smoothed by said smoothing unit and after dividing the three-dimensional model into a plurality of hexahedral elements which are formed with edges each having a length shorter than said predetermined radius of curvature; and
 - a number-of-divisions varying unit which varies the number of said plurality of hexahedral elements,wherein said analyzing unit determines a converged value of a physical quantity based on a local maximum of calculated values of said physical quantity which are obtained while increasing the number of said plurality of hexahedral elements by said number-of-divisions varying unit.
2. (original) A three-dimensional model analyzing apparatus according to claim 1, wherein said edge detecting unit detects only at least one edge having an angle which does not exceed a predetermined amount.
3. (cancelled)
4. (cancelled)

5. (cancelled)

6. (currently amended) A computer-readable storage medium storing a program which makes a computer execute a process for analyzing a physical property of a three-dimensional model, said program further makes said computer realize:

an information receiving unit which receives information on a three-dimensional model as an object to be analyzed;

an edge detecting unit which detects an edge of said three-dimensional model;

a smoothing unit which smoothes said edge and transforms said edge into a curved surface having a predetermined radius of curvature;

an analyzing unit which analyzes said three-dimensional model in accordance with a finite element method after said edge is smoothed by said smoothing unit and after dividing the three-dimensional model into a plurality of hexahedral elements which are formed with edges each having a length shorter than said predetermined radius of curvature; and

a number-of-divisions varying unit which varies the number of said plurality of hexahedral elements,

wherein said analyzing unit determines a converged value of a physical quantity based on a local maximum of calculated values of said physical quantity which are obtained while increasing the number of said plurality of hexahedral elements by said number-of-divisions varying unit.

7. (new) A method comprising:

detecting an edge of a 3D model;

smoothing the detected edge to form a curved surface having a predetermined radius;

dividing the 3D model into hexahedral elements wherein the length of each edge of the hexahedral elements is less than the predetermined radius; and

analyzing the 3D model.